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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/401,167	09/21/1999	YUNG KU LEE	929-2	4303

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EXAMINER

VERBITSKY, GAIL KAPLAN

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/401,167

Applicant(s)

LEE, YUNG KU

Examiner

Gail Verbitsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-64 is/are pending in the application.
- 4a) Of the above claim(s) 25-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 53-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Objections

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 1-40 have been renumbered as 25-64 respectively.

Election/Restriction

2. Newly submitted claims 25-52 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

A) the originally claimed invention, i.e., claims 53-64, drawn to a thermometer, classified in class 374, subclass 208.

B) the invention stated in claims 25-52 is directed to method of manufacturing of the thermometer using an injection molding die and injection molding system, classified in class 425 and 29.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution

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on the merits. Accordingly, claims 25-52 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

3. Claims 56-57, 61, 64 are objected to because of the following informalities:

Claims 56, 57: “the injection molding die surface” lacks antecedent basis.

Claim 61: “transparent plastic material” in line 2 lacks antecedent basis.

Claim 64: “the main part” in line 1 lacks antecedent basis.

Appropriate correction is required.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “inner surface”, “outer surface”, “first surface area”, “second surface area”, as stated in claim 53, the “first portion of an injection molding die”, “second portion of the injection molding die”, “injection molding surface” as stated in claims 54-57, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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The drawings are objected to under 37 CFR 1.83(a) because they fail to show an injection molding die as described in the specification/ claims. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
6. Claims 53-64 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this case,
Claim 53: A) the limitation stating that the “first surface roughness ... is low enough to render the display element”, has not been described in the specification.
B) the limitation stating that the “second surface roughness is greater than the first surface roughness” in line 15 has not been described in the specification.
C) the limitation stating “allow only diffuse light” has not been described in the specification (see spec., page 6, line 19).

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Claim 54: the limitation stating “etching a *first portion* of an injection molding die” has not been described in the specification.

Claim 55: the limitation stating “leaving a *second portion* of the injection molding die in an un-etched state has not been described in the specification.

Claim 56: the limitation stating that the first portion of the injection molding die is produced by mechanical etching of the injection molding surface has not been described in the specification.

Claim 57: the limitation stating that the first portion of the injection molding die is produced by chemical etching of the injection molding surface has not been described in the specification

Claim 58: the limitation stating that “the first surface area is produced by polishing a sub-portion of the second surface area...” in lines 1-2 has not been described in the specification.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 53-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 53 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: it is not clear how the first surface area is structurally related to the second surface area.

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Claim 53: A) the claim language is confusing because it is not clear how the first surface area can have some roughness, and the second surface area has a greater roughness and “the electronic surface to be less visible” if, according to claim 53, the housing is transparent? Perhaps applicant needs to indicate that the originally transparent integral housing was roughened so as to become less transparent/ translucent/ opaque. Is this a proper interpretation of the invention?

B) the limitation stating “allow only diffuse light” makes the claim language confusing. Perhaps applicant means: allow (transmit) and diffuse light to shine... Is this a proper interpretation of the invention? Furthermore, please note, that in the rejections on the merits, the Examiner considers that said area transmits and diffuses light.

Claim 54: the claim language is confusing because it is not clear how the second surface area is produced by etching a first portion of an injection molding die. Should a (transparent) material should first be inserted in the die in order the second surface area to be produced? Does applicant mean that the second surface area roughness (of the thermometer) is produced by placing the transparent material into injection molding die, and that the first portion of the die was prepared by etching before the transparent material was placed into the die?

Claim 55: the claim language is confusing because it is not clear how the second surface area is produced by leaving a second portion of the injection molding die in an un-etched state. Should a (transparent) material be inserted in the die in order the first surface area to be produced? Does applicant mean that the second surface area roughness (of the thermometer) is

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produced by placing the transparent material into injection molding die, and that the second portion of the die was prepared by etching before the transparent material was placed into the die?

Claims 54-64 are rejected by virtue of their dependency on claim 53.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi (U.S.4729672) in view of Pallanes (U.S. 597524).

Takagi discloses an electronic thermometer comprising a temperature sensor, an electronic circuit coupled to the temperature sensor to process temperature data measured by the temperature sensor, a display element coupled to the electronic circuit to display a temperature corresponding to the temperature data measured by the temperature sensor, metal tip attached to a tapered end of an integral housing. The integral housing enclosing the electronic circuit and display element, and comprising a transparent material. The housing having an inner case body (surface) and an outer opaque case body (surface). The housing also has a first surface area

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formed by partially cutting away to form/ expose the display element covered by only the inner surface/ case/ body which is transparent (low roughness) to make the display visible (entire col. 2). The rest of the surface area of the housing is a second surface area with a second roughness (opacity) on the outer surface (outer case body), the second surface roughness is not a transparent, but opaque and thus, has a greater roughness than the first surface area.

Takagi does not explicitly state that the second surface area has the particular roughness that allows only a diffuse light through, as stated in claim 53.

Pallanes discloses a device wherein a surface (second surface area) is made of a translucent material (higher roughness/ opacity than a transparent material) which transmits and diffuses light rays so as an object beyond the material (electronic circuit) can not be clearly seen through the material (through the second surface area).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Takagi, so as to have the second area surface of such a roughness/ opacity (translucency) so that it only transmits (allows) through a diffuse light, in order to make the electronic circuit behind the second surface area less visible, so as order to provide the device with an aesthetic appearance.

With respect to “thereby”: it has been held that the functional “thereby”/ “whereby” statement does not define any structure and accordingly can not serve to distinguish. In re mason, 114 USPQ 127, 44 CCPA 937 (1957).

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Allowable Subject Matter

11. Claims 54-64 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices.

13. Any inquiry concerning this communication should be directed to the Examiner Verbitsky whose telephone number is (703) 306-5473.

Any inquiry of general nature should be directed to the Group Receptionist whose telephone number is (703) 308-0956.

GKV

August 12, 2003

Gail Verbitsky



Patent Examiner, TC 2800